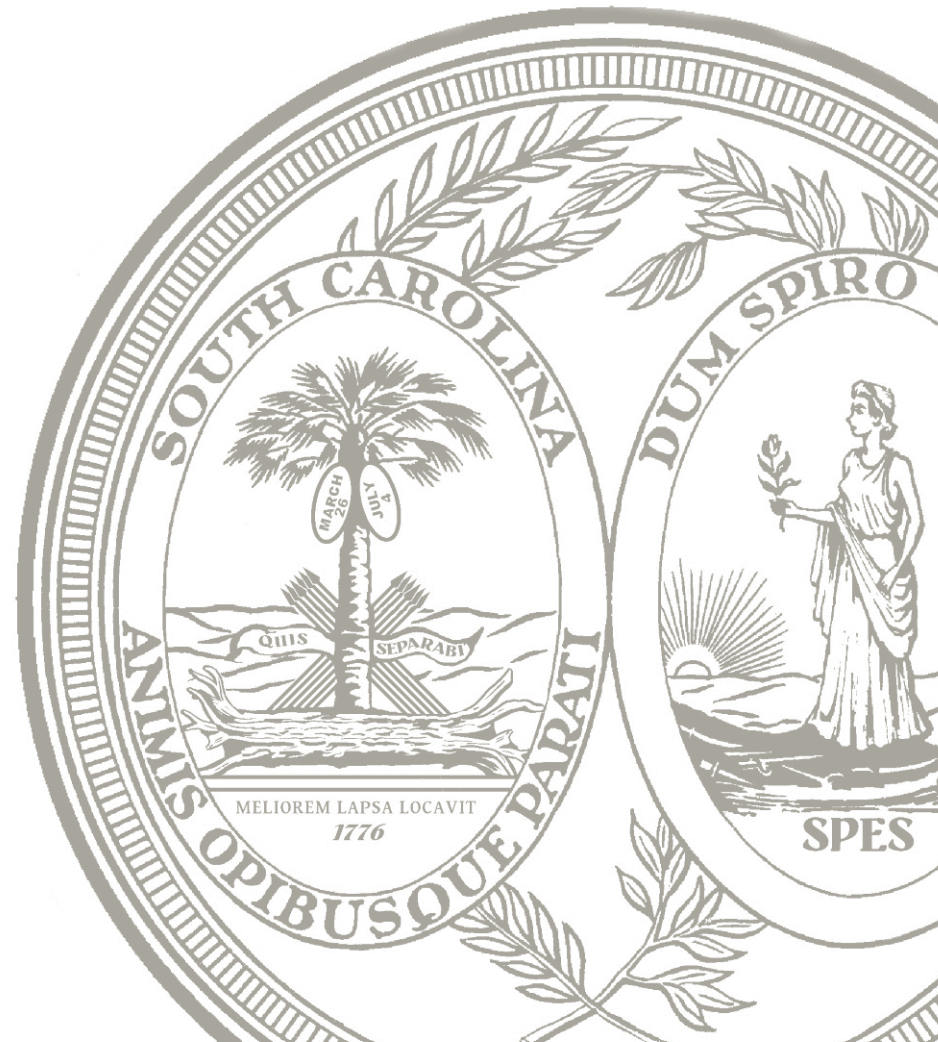


# Analyze Data for Game-Changing Results

Part of Data Literacy for  
Instructional Leaders Series

**SCDE Office of Educator  
Effectiveness and Leadership  
Development**



# Facilitators



**John Arnold**

Director of Accountability  
and Assessment

Richland School District Two



**Jennifer L. Morrison**

Chief Strategy Officer  
SC Department of Education



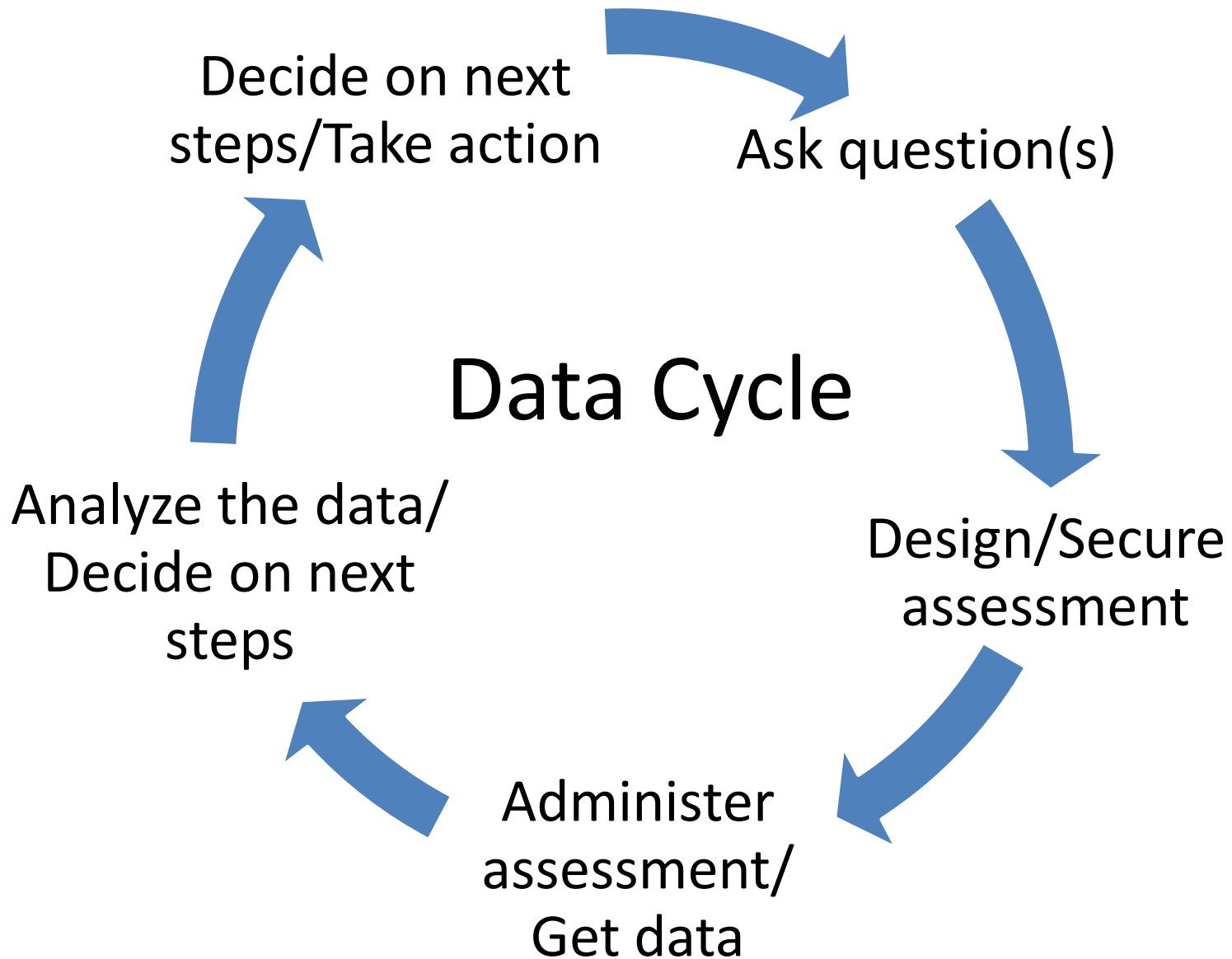
# Session Outcomes

- Identify game-changing data for your role versus game-changing data for teachers.
- Identify the most critical thing you need to remember when you analyze data as a principal.
- Identify the most critical thing you need to remember when coaching teachers to analyze data.

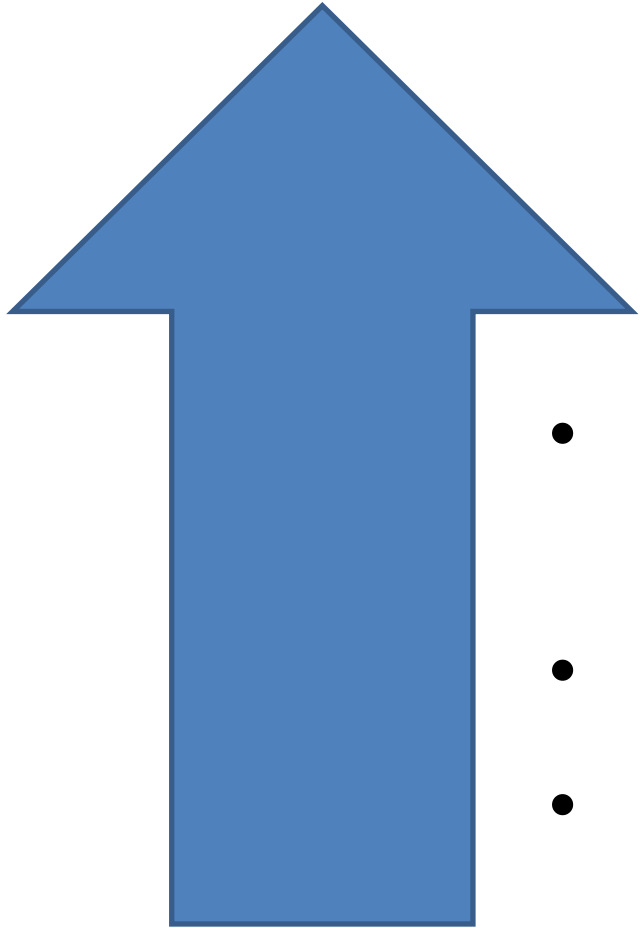
# PADEPP Standards

## Standard 2: Instructional Leadership

- Demonstrates proficiency in analyzing research and assessment data.
- Ensures the use of data from appropriate assessments and educational research to continuously monitor progress and strategically improve instruction in response to ongoing progress monitoring.



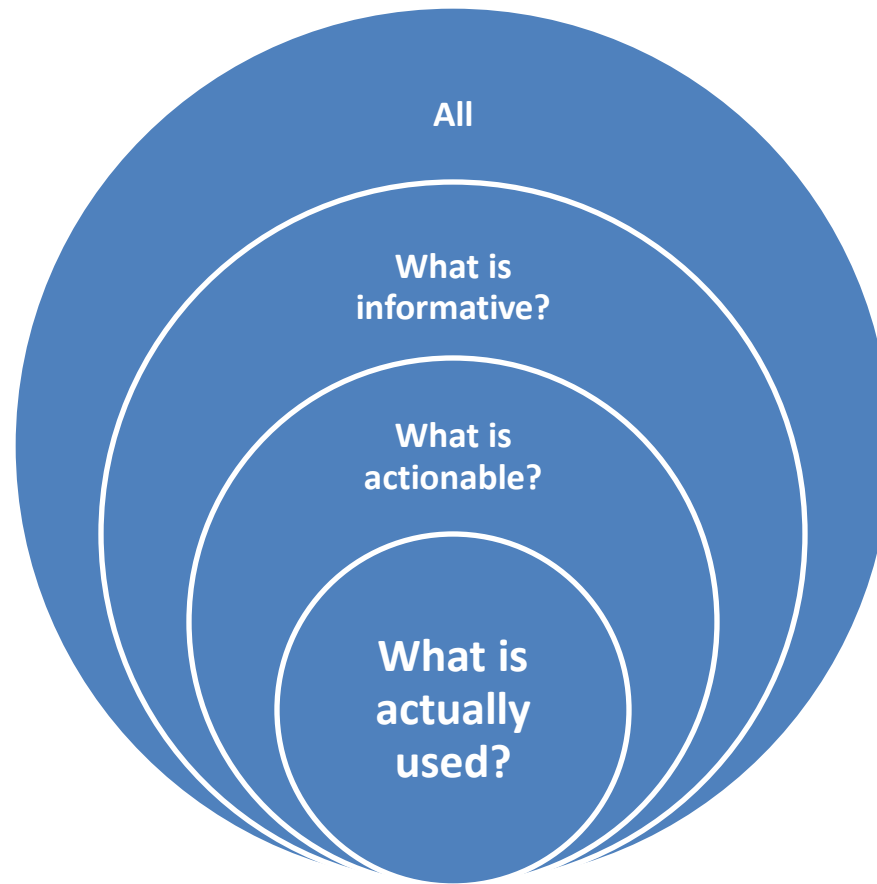
# Information



Data

- Look for connections
- Structure
- Consider context

# Data versus information?



# Levels of Data

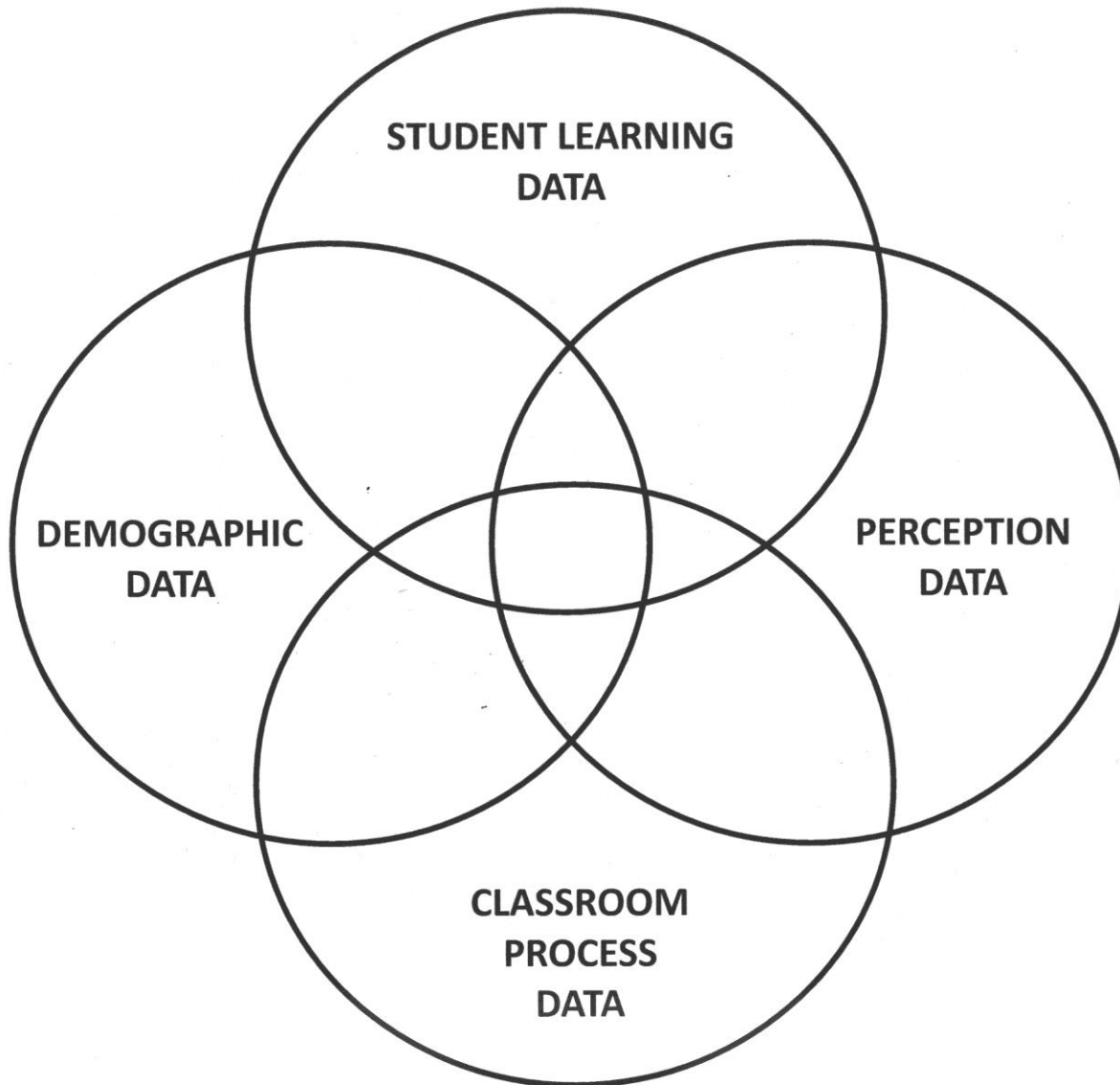
| Level of Data  | Student Learning Example                                | For what role is this level of data most actionable? |
|--|---|--|
| <b>International</b> (across countries)                    | TIMSS or PISA results                                   | National leadership                                  |
| <b>National</b> (across states)                            | NEAP results  | National leadership; State leadership                |
| <b>State</b> (across districts)                            | SCReady results   | State leadership; District leadership                |
| <b>District</b> (across schools)                           | SCReady results   | District leadership                                  |
| <b>School</b> (across teachers, subjects, or teams)        | SCReady or MAP results                                  | School leadership                                    |
| <b>Classroom</b> (across classes, students, or groups)     | Classroom assignment or assessment results; MAP results | Teacher  |
| <b>Student</b> (across assignments, within one assignment) | Classroom assignment or assessment results; MAP results | Teacher; Student                                     |





**Focus on game-changers.**

Image:  
<https://localtvwhotv.files.wordpress.com/2017/05/fireworks.jpg?quality=85&strip=all&w=1200>



(Bernhardt, 2009)

What are the game-changing data  
in your landscape for your role?  
For teachers in their roles?



# Data Analysis

There are many ways to analyze data...

- Item analysis
- Subgroup comparison
- Comparison with goal/target
- Measurement of growth
- Coding of themes
- Grouping
- Identification of patterns/trends



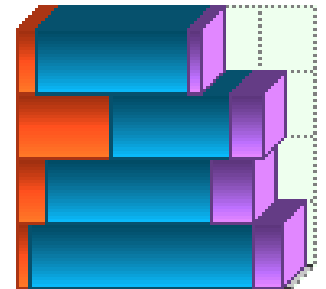
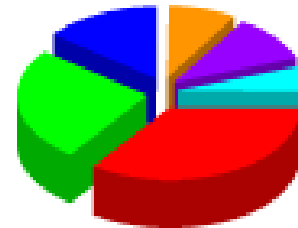
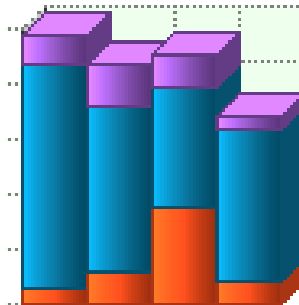
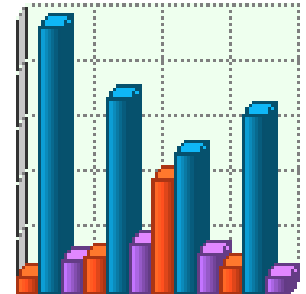
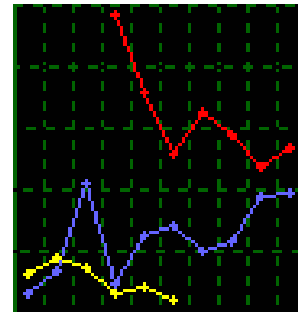
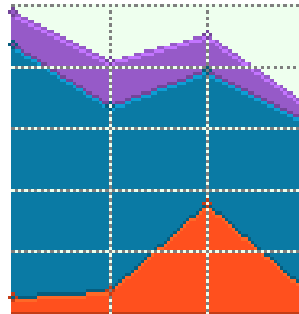
# Principal example: How would you analyze?

| 2016-2017 SCDE Parent Survey Results  |              |        |        |         |
|---|--------------|--------|--------|---------|
| Percent of Parents Agreeing or Strongly Agreeing with Statements - 3 Year Trend                 |              |        |        |         |
| Home-School Relations, Learning Environments, Social and Physical Environment, and IGP Sections |              |        |        |         |
|   | Richland Two |        |        | SC      |
|   | 2015         | 2016   | 2017   | 2017    |
|   | n=1924       | n=1411 | n=1752 | n=54954 |
| <b>Home-School Relations</b>  |              |        |        |         |
| I AM SATISFIED WITH HOME-SCHOOL RELATIONS AT MY CHILD'S SCHOOL.                                 | 69.0         | 72.9   | 73.0   | 73.8    |
| My child's school considers changes based on what parents say.                                  | 48.3         | 52.4   | 57.4   | 56.5    |
| My child's school gives me information about what my child should be learning in school.        | 75.5         | 75.4   | 74.3   | 72.6    |
| My child's school includes me in decision-making.   | 68.6         | 70.4   | 72.3   | 71.9    |
| My child's school returns my phone calls or e-mails promptly.                                   | 83.5         | 81.8   | 82.5   | 81.7    |
| My child's school schedules activities at times that I can attend.                              | 79.0         | 80.8   | 81.1   | 80.2    |
| My child's school treats all students fairly.   | 68.9         | 70.3   | 72.7   | 72.7    |
| My child's teachers contact me to say good things about my child.                               | 53.0         | 55.5   | 56.5   | 59.0    |
| My child's teachers invite me to visit my child's classrooms during the school day.             | 49.8         | 53.6   | 55.7   | 49.9    |
| My child's teachers tell me how I can help my child learn.                                      | 62.7         | 64.5   | 65.5   | 63.5    |
| The principal at my child's school is available and welcoming.                                  | 77.1         | 80.6   | 81.0   | 83.1    |
| <b>Learning Environment</b>   |              |        |        |         |
| I AM SATISFIED WITH THE LEARNING ENVIRONMENT AT MY CHILD'S SCHOOL.                              | 88.1         | 87.9   | 89.0   | 87.2    |
| My child's school has high expectations for student learning.                                   | 92.8         | 93.2   | 94.5   | 91.9    |
| My child's teachers encourage my child to learn.  | 91.1         | 92.7   | 93.9   | 91.8    |
| My child's teachers give homework that helps my child learn.                                    | 90.0         | 90.0   | 91.8   | 88.1    |
| My child's teachers provide extra help when my child needs it.                                  | 84.2         | 83.1   | 85.7   | 83.1    |



# Reports

- Many assessment systems provide data analysis in the form of reports.
- There are pros and cons to using pre-analyzed data in reports.



What is the most critical thing you need to remember when you analyze data as a principal?





# Teacher example: How would you analyze?

## Report Criteria

Class  
Is: MATH501 - Mathematics

22 rows in report

| Student                | 2017 SC Ready  |                             |  |  |   |
|------------------------|--|-----------------------------|--|--|---|
| English Proficiency    | Math > Standards > Algebraic Thinking and Operations | Math > Standards > Geometry | Math > Standards > Measurement and Data Analysis | Math > Standards > Number Sense and Base Ten | Math > Standards > Number Sense and Operations- Fractions |
|                        | Middle   | Middle                      | Middle   | High   | Middle  |
| 9 - English Speaker II | Low  | Middle                      | Middle   | Middle                                       | High  |
| 9 - English Speaker II | Low  | Low                         | Middle   | Middle                                       | Low   |
| 9 - English Speaker II | Low  | Low                         | Middle   | High   | Middle  |
| 9 - English Speaker II | Low  | Low                         | Middle   | Low  | Low   |
| 9 - English Speaker II | Low  | Low                         | Middle   | Middle                                       | Middle  |
| 9 - English Speaker II | Low  | Low                         | Low  | Low  | Middle  |
| 9 - English Speaker II | Middle   | High                        | Middle   | High   | Middle  |
| 9 - English Speaker II | Middle   | High                        | Middle   | High   | High  |
| 9 - English Speaker II | Middle   | Middle                      | High   | Low  | Middle  |
| 9 - English Speaker II | Middle   | Middle                      | Low  | Middle                                       | Middle  |
| 9 - English Speaker II | Middle   | High                        | High   | High   | High  |
| 9 - English Speaker II | High   | High                        | High   | High   | High  |

# Teacher example: How would you analyze?

1. A
2. C
3. D
4. A
5. A

# Teacher example: How would you analyze?

|    |   |             |     |            |            |
|----|---|-------------|-----|------------|------------|
| 1. | A | <b>A-29</b> | B-0 | C-1        | D-0        |
| 2. | C | A-10        | B-6 | <b>C-8</b> | D-6        |
| 3. | D | A-15        | B-5 | C-3        | <b>D-7</b> |
| 4. | A | <b>A-5</b>  | B-5 | C-10       | D-10       |
| 5. | A | <b>A-30</b> | B-0 | C-0        | D-0        |

# Coaching Rules

Make certain...

- To scaffold what you ask teachers to do.
- The teacher owns the data.
- The teacher owns the analysis.
- To remember that your goal is developing data literacy.
- To avoid jargon and intimidation.





Data literacy is the ability to gather, interpret, and use multiple data sources effectively to improve student learning.

What is the most critical thing you  
need to remember when you  
coach teachers as they analyze  
data?





## I can...

- Identify game-changing data for my role versus game-changing data for teachers.
- Identify the most critical thing I need to remember when I analyze data as a principal.
- Identify the most critical thing I need to remember when coaching teachers to analyze data.

# Application

*Coach a Teacher to Improve Data Analysis*

Please complete the professional learning activity associated with this session to help you apply your learning.



Image:  
<http://blog.atomiclearning.com/highed/sites/blogs.atomiclearning.com/files/images/bigstock-lightbulb-vector.png>



# References

Bernhardt, V. L. (2009). *Data, data everywhere: Bringing all the data together for continuous school improvement*. Larchmont, NY: Eye on Education, Inc.